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PI:	Nel, Andre Elias
Institution:	University Of California Los Angeles
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Classification NanoSAR development for cytotoxicity of metal oxide nanoparticles.	Liu, Rong; Rallo, Robert; George, Saji; Ji, Zhaoxia; Nair, Sumitra; Nel, Andre E; Cohen, Yoram	Small (2011 Apr 18)	7 / 1118-26	PubMed Citat

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Custom-designed nanomaterial libraries for testing metal oxide toxicity.	Pokhrel, Suman; Nel, Andre E; Madler, Lutz	Acc Chem Res (2013 Mar 19)	46 / 632-41	PubMed Citat
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Dispersal state of multiwalled carbon nanotubes elicits profibrogenic cellular responses that correl ...	Wang, Xiang; Xia, Tian; Ntim, Susana Addo; Ji, Zhaoxia; Lin, Sijie; Meng, Huan; Chung, Choong-Heui; George, Saji; Zhang, Haiyuan; Wang, Meiyang; Li, Ning; Yang, Yang; Castranova, Vincent; Mitra, Somenath; Bonner, James C; Nel, Andre E	ACS Nano (2011 5 / 9772-87 Dec 27)	PubMed Citat
Dispersion and stability optimization of TiO ₂ nanoparticles in cell culture media.	Ji, Zhaoxia; Jin, Xue; George, Saji; Xia, Tian; Meng, Huan; Wang, Xiang; Suarez, Elizabeth; Zhang, Haiyuan; Hoek, Eric M V; Godwin, Hilary; Nel, Andre E; Zink, Jeffrey I	Environ Sci Technol (2010 Oct 1) 44 / 7309-14	PubMed Citat
Engineered design of mesoporous silica nanoparticles to deliver doxorubicin and P-glycoprotein siRNA ...	Meng, Huan; Liong, Monty; Xia, Tian; Li, Zongxi; Ji, Zhaoxia; Zink, Jeffrey I; Nel, Andre E	ACS Nano (2010 4 / 4539-50 Aug 24)	PubMed Citat
Enhancing the imaging and biosafety of upconversion nanoparticles through phosphonate coating.	Li, Ruibin; Ji, Zhaoxia; Dong, Juyao; Chang, Chong Hyun; Wang, Xiang; Sun, Bingbing; Wang, Meiyang; Liao, Yu-Pei; Zink, Jeffrey I; Nel, Andre E; Xia, Tian	ACS Nano (2015 9 / 3293-306 Mar 24)	PubMed Citat
Evidence for Fe(2+) in wurtzite coordination: iron doping stabilizes ZnO nanoparticles.	Xiao, Jianping; Kuc, Agnieszka; Pokhrel, Suman; Schowalter, Marco; Parlapalli, Satyam; Rosenauer, Andreas; Frauenheim, Thomas; Madler, Lutz; Pettersson, Lars G M; Heine, Thomas	Small (2011 Oct 7 / 2879-86 17)	PubMed Citat
Fe-doped ZnO nanoparticles: the oxidation number and local charge on iron, studied by ⁵⁷ Fe Moóybauer ...	Xiao, Jianping; Kuc, Agnieszka; Pokhrel, Suman; Madler, Lutz; Pottgen, Rainer; Winter, Florian; Frauenheim, Thomas; Heine, Thomas	Chemistry (2013 19 / 3287-91 Mar 4)	PubMed Citat

High content screening in zebrafish speeds up hazard ranking of transition metal oxide nanoparticles ...	Lin, Sijie; Zhao, Yan; Xia, Tian; Meng, Huan; Ji, Zhaoxia; Liu, Rong; George, Saji; Xiong, Sijing; Wang, Xiang; Zhang, Haiyuan; Pokhrel, Suman; Madler, Lutz; Damoiseaux, Robert; Lin, Shuo; Nel, Andre E	ACS Nano (2011 5 / 7284-95 Sep 27)	PubMed Citat
Interactions of amino acids and polypeptides with metal oxide nanoparticles probed by fluorescent in ...	Joshi, Sweccha; Ghosh, Indrajit; Pokhrel, Suman; Madler, Lutz; Nau, Werner M	ACS Nano (2012 6 / 5668-79 Jun 26)	PubMed Citat
Interference in autophagosome fusion by rare earth nanoparticles disrupts autophagic flux and regula ...	Li, Ruibin; Ji, Zhaoxia; Qin, Hongqiang; Kang, Xuedong; Sun, Bingbing; Wang, Meiyang; Chang, Chong Hyun; Wang, Xiang; Zhang, Haiyuan; Zou, Hanfa; Nel, Andre E; Xia, Tian	ACS Nano (2014 8 / 10280-92 Oct 28)	PubMed Citat
Lanthanide Hydroxide Nanoparticles Induce Angiogenesis via ROS-Sensitive Signaling.	Zhao, Haishan; Osborne, Olivia J; Lin, Sijie; Ji, Zhaoxia; Damoiseux, Robert; Wang, Yuqiang; Nel, André E; Lin, Shuo	Small (2016 12 / 4404-11 Aug)	PubMed Citat
Mechanisms of nanosilver-induced toxicological effects: more attention should be paid to its subleth ...	Wang, Zhe; Xia, Tian; Liu, Sijin	Nanoscale (2015 7 / 7470-81 May 7)	PubMed Citat
Mesoporous Silica Nanoparticle Nanocarriers: Biofunctionality and Biocompatibility.	Tarn, Derrick; Ashley, Carlee E; Xue, Min; Carnes, Eric C; Zink, Jeffrey I; Brinker, C Jeffrey	Acc Chem Res (2013 Feb 6)	PubMed Citat
Nanomaterial toxicity testing in the 21st century: use of a predictive toxicological approach and hi ...	Nel, Andre; Xia, Tian; Meng, Huan; Wang, Xiang; Lin, Sijie; Ji, Zhaoxia; Zhang, Haiyuan	Acc Chem Res (2013 Mar 19)	PubMed Citat
NLRP3 inflammasome activation induced by engineered nanomaterials.	Sun, Bingbing; Wang, Xiang; Ji, Zhaoxia; Li, Ruibin; Xia, Tian	Small (2013 May 27)	PubMed Citat
No time to lose--high throughput screening to assess nanomaterial safety.	Damoiseaux, R; George, S; Li, M; Pokhrel, S; Ji, Z; France, B; Xia, T; Suarez, E; Rallo, R; Madler, L; Cohen, Y; Hoek, E M V; Nel, A	Nanoscale (2011 3 / 1345-60 Apr)	PubMed Citat

Particulate matter and atherosclerosis: role of particle size, composition and oxidative stress.	Araujo, Jesus A; Nel, Andre E	Part Fibre Toxicol ()	6 / 24	PubMed Citat
PdO doping tunes band-gap energy levels as well as oxidative stress responses to a CoO p-type semi ...	Zhang, Haiyuan; Pokhrel, Suman; Ji, Zhaoxia; Meng, Huan; Wang, Xiang; Lin, Sijie; Chang, Chong Hyun; Li, Linjiang; Li, Ruibin; Sun, Bingbing; Wang, Meiyang; Liao, Yu-Pei; Liu, Rong; Xia, Tian; Mädler, Lutz; Nel, André E	J Am Chem Soc (2014 Apr 30)	136 / 6406-20	PubMed Citat
Physicochemical properties determine nanomaterial cellular uptake, transport, and fate.	Zhu, Motao; Nie, Guangjun; Meng, Huan; Xia, Tian; Nel, Andre; Zhao, Yuliang	Acc Chem Res (2013 Mar 19)	46 / 622-31	PubMed Citat
Pluronic F108 coating decreases the lung fibrosis potential of multiwall carbon nanotubes by reducin ...	Wang, Xiang; Xia, Tian; Duch, Matthew C; Ji, Zhaoxia; Zhang, Haiyuan; Li, Ruibin; Sun, Bingbing; Lin, Sijie; Meng, Huan; Liao, Yu-Pei; Wang, Meiyang; Song, Tze-Bin; Yang, Yang; Hersam, Mark C; Nel, Andre E	Nano Lett (2012 Jun 13)	12 / 3050-61	PubMed Citat
Polyethyleneimine coating enhances the cellular uptake of mesoporous silica nanoparticles and allows ...	Xia, Tian; Kovichich, Michael; Liong, Monty; Meng, Huan; Kabehie, Sanaz; George, Saji; Zink, Jeffrey I; Nel, Andre E	ACS Nano (2009 Oct 27)	3 / 3273-86	PubMed Citat
Potential health impact of nanoparticles.	Xia, Tian; Li, Ning; Nel, Andre E	Annu Rev Public Health (2009)	30 / 137-50	PubMed Citat
Processing pathway dependence of amorphous silica nanoparticle toxicity: colloidal vs pyrolytic.	Zhang, Haiyuan; Dunphy, Darren R; Jiang, Xingmao; Meng, Huan; Sun, Bingbing; Tarn, Derrick; Xue, Min; Wang, Xiang; Lin, Sijie; Ji, Zhaoxia; Li, Ruibin; Garcia, Fred L; Yang, Jing; Kirk, Martin L; Xia, Tian; Zink, Jeffrey I; Nel, Andre; Brinker, C Jeffrey	J Am Chem Soc (2012 Sep 26)	134 / 15790-804	PubMed Citat

Quantitative techniques for assessing and controlling the dispersion and biological effects of multi ...	Wang, Xiang; Xia, Tian; Ntim, Susana Addo; Ji, Zhaoxia; George, Saji; Meng, Huan; Zhang, Haiyuan; Castranova, Vincent; Mitra, Somenath; Nel, Andre E	ACS Nano (2010 4 / 7241-52 Dec 28)	PubMed Citat
Reduction of Acute Inflammatory Effects of Fumed Silica Nanoparticles in the Lung by Adjusting Silan ...	Sun, Bingbing; Pokhrel, Suman; Dunphy, Darren R; Zhang, Haiyuan; Ji, Zhaoxia; Wang, Xiang; Wang, Meiyong; Liao, Yu-Pei; Chang, Chong Hyun; Dong, Juyao; Li, Ruibin; Mädler, Lutz; Brinker, C Jeffrey; Nel, André E; Xia, Tian	ACS Nano (2015 9 / 9357-72 Sep 22)	PubMed Citat
Repetitive Dosing of Fumed Silica Leads to Profibrogenic Effects through Unique Structure-Activity R ...	Sun, Bingbing; Wang, Xiang; Liao, Yu-Pei; Ji, Zhaoxia; Chang, Chong Hyun; Pokhrel, Suman; Ku, Justine; Liu, Xiangsheng; Wang, Meiyong; Dunphy, Darren R; Li, Ruibin; Meng, Huan; Mädler, Lutz; Brinker, C Jeffrey; Nel, André E; Xia, Tian	ACS Nano (2016 10 / 8054-66 Aug 23)	PubMed Citat
Role of Fe doping in tuning the band gap of TiO ₂ for the photo-oxidation-induced cytotoxicity paradi ...	George, Saji; Pokhrel, Suman; Ji, Zhaoxia; Henderson, Bryana L; Xia, Tian; Li, LinJiang; Zink, Jeffrey I; Nel, Andre E; Madler, Lutz	J Am Chem Soc (2011 Jul 27) 133 / 11270-8	PubMed Citat
Self-organizing map analysis of toxicity-related cell signaling pathways for metal and metal oxide n ...	Rallo, Robert; France, Bryan; Liu, Rong; Nair, Sumitra; George, Saji; Damoiseaux, Robert; Giralt, Francesc; Nel, Andre; Bradley, Kenneth; Cohen, Yoram	Environ Sci Technol (2011 Feb 15) 45 / 1695-702	PubMed Citat
Surface charge and cellular processing of covalently functionalized multiwall carbon nanotubes deter ...	Li, Ruibin; Wang, Xiang; Ji, Zhaoxia; Sun, Bingbing; Zhang, Haiyuan; Chang, Chong Hyun; Lin, Sijie; Meng, Huan; Liao, Yu-Pei; Wang, Meiyong; Li, Zongxi; Hwang, Angela A; Song, Tze-Bin; Xu, Run; Yang, Yang; Zink, Jeffrey I; Nel, Andre E; Xia, Tian	ACS Nano (2013 7 / 2352-68 Mar 26)	PubMed Citat

Surface defects on plate-shaped silver nanoparticles contribute to its hazard potential in a fish gi ...	George, Saji; Lin, Sijie; Ji, Zhaoxia; Thomas, Courtney R; Li, LinJiang; Mecklenburg, Mathew; Meng, Huan; Wang, Xiang; Zhang, Haiyuan; Xia, Tian; Hohman, J Nathan; Lin, Shuo; Zink, Jeffrey I; Weiss, Paul S; Nel, Andre E	ACS Nano (2012 6 / 3745-59 May 22)	PubMed Citat
Surface interactions with compartmentalized cellular phosphates explain rare earth oxide nanoparticl ...	Li, Ruibin; Ji, Zhaoxia; Chang, Chong Hyun; Dunphy, Darren R; Cai, Xiaoming; Meng, Huan; Zhang, Haiyuan; Sun, Bingbing; Wang, Xiang; Dong, Juyao; Lin, Sijie; Wang, Meiyong; Liao, Yu-Pei; Brinker, C Jeffrey; Nel, Andre; Xia, Tian	ACS Nano (2014 8 / 1771-83 Feb 25)	PubMed Citat
The adjuvant effect of ambient particulate matter is closely reflected by the particulate oxidant po ...	Li, Ning; Wang, Meiyong; Bramble, Lori A; Schmitz, Debra A; Schauer, James J; Sioutas, Constantinos; Harkema, Jack R; Nel, Andre E	Environ Health Perspect (2009 Jul) 117 / 1116-23	PubMed Citat
The fate of ZnO nanoparticles administered to human bronchial epithelial cells.	Gilbert, Benjamin; Fakra, Sirine C; Xia, Tian; Pokhrel, Suman; Madler, Lutz; Nel, Andre E	ACS Nano (2012 6 / 4921-30 Jun 26)	PubMed Citat
Understanding biophysicochemical interactions at the nano-bio interface.	Nel, Andre E; Mädler, Lutz; Velegol, Darrell; Xia, Tian; Hoek, Eric M V; Somasundaran, Ponisseril; Klaessig, Fred; Castranova, Vince; Thompson, Mike	Nat Mater (2009 Jul) 8 / 543-57	PubMed Citat
Use of a high-throughput screening approach coupled with in vivo zebrafish embryo screening to devel ...	George, Saji; Xia, Tian; Rallo, Robert; Zhao, Yan; Ji, Zhaoxia; Lin, Sijie; Wang, Xiang; Zhang, Haiyuan; France, Bryan; Schoenfeld, David; Damoiseaux, Robert; Liu, Rong; Lin, Shuo; Bradley, Kenneth A; Cohen, Yoram; Nel, Andre E	ACS Nano (2011 5 / 1805-17 Mar 22)	PubMed Citat

Use of a rapid cytotoxicity screening approach to engineer a safer zinc oxide nanoparticle through i ...	George, Saji; Pokhrel, Suman; Xia, Tian; Gilbert, Benjamin; Ji, Zhaoxia; Schowalter, Marco; Rosenauer, Andreas; Damoiseaux, Robert; Bradley, Kenneth A; Madler, Lutz; Nel, Andre E	ACS Nano (2010 4 / 15-29 Jan 26)	PubMed Citat
Use of metal oxide nanoparticle band gap to develop a predictive paradigm for oxidative stress and a ...	Zhang, Haiyuan; Ji, Zhaoxia; Xia, Tian; Meng, Huan; Low-Kam, Cecile; Liu, Rong; Pokhrel, Suman; Lin, Sijie; Wang, Xiang; Liao, Yu-Pei; Wang, Meiying; Li, Linjiang; Rallo, Robert; Damoiseaux, Robert; Telesca, Donatello; Madler, Lutz; Cohen, Yoram; Zink, Jeffrey I; Nel, Andre E	ACS Nano (2012 6 / 4349-68 May 22)	PubMed Citat
Zebrafish high-throughput screening to study the impact of dissolvable metal oxide nanoparticles on ...	Lin, Sijie; Zhao, Yan; Ji, Zhaoxia; Ear, Jason; Chang, Chong Hyun; Zhang, Haiyuan; Low-Kam, Cecile; Yamada, Kristin; Meng, Huan; Wang, Xiang; Liu, Rong; Pokhrel, Suman; Madler, Lutz; Damoiseaux, Robert; Xia, Tian; Godwin, Hilary A; Lin, Shuo; Nel, Andre E	Small (2013 May 9 / 1776-85 27)	PubMed Citat
Zebrafish: an in vivo model for nano EHS studies.	Lin, Sijie; Zhao, Yan; Nel, Andre E; Lin, Shuo	Small (2013 May 9 / 1608-18 27)	PubMed Citat